



BAYFIELD COUNTY FORESTRY AND PARKS DEPARTMENT

2017 BUDGET NARRATIVE

BUDGET SUMMARY AND HIGHLIGHTS

Revenues: Forest Management Program

Traditionally, all of the revenues received over the course of a year came from the management of the County Forest, primarily through stumpage. However, over the past few years, the Forestry Department has been assigned primary management responsibilities of both the County Parks and Trails Programs. In addition to the revenues received from the sale of wood (stumpage), the Forestry and Parks Department now receives revenues from camping and other parks related activities, as well as monies pertaining to state funded motorized trail maintenance, rehabilitation and construction.

Sale of Wood (Timber Sales)

The sale of wood is the primary source of revenue for the Forestry and Parks Department (approximately 96% of total revenues received from County Forest management and 89% Department wide). Revenues from the sale of wood on the County Forest for the calendar year 2017 are projected to increase from the adopted budget of \$2.9 million in 2016 to a conservative estimate of \$3.0 million. Much of the predicted revenue increase is the end result of adding a new forester position in 2011, as well as the addition of 2,602 acres of forest land to the County Forest, via the Knowles-Nelson Stewardship Land Acquisition grant (in 2015). The position was added, in part, to assist in the management of a growing sustainable timber harvest goal (see Tables 13 and 14). The total allowable harvest goal for 2016 is 5,060 acres, an increase of over 60% since 2006.

Table 1 displays the total number of timber sales, acres and bid values from 2007-2017 (2016 & 2017 are estimates).

Table 1: Bayfield County Forest Timber Sale Summary

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Calendar	Sales	Acres	Sales	Acres	Acres	Timber Sale	Bid Value	Timber
Year	Offered	Offered	Sold	Sold	Not Sold	Bid Values	per Acre	Revenues
2007	59	3,771	45	3,157	614	\$2,140,897	\$678	\$2,167,156
2008	58	3,546	55	3,507	39	\$2,381,513	\$679	\$2,621,308
2009	45	3,297	42	3,100	197	\$2,510,601	\$810	\$2,305,259
2010	40	3,218	40	3,218	0	\$2,404,178	\$747	\$2,047,663
2011	54	4,156	54	4,156	0	\$3,629,330	\$873	\$2,477,066
2012	53	4,782	53	4,782	0	\$4,900,194	\$1,025	\$2,696,756
2013	54	4,275	53	4,177	98	\$3,614,091	\$865	\$3,904,104
2014	61	4,388	61	4,388	0	\$5,252,530	\$1,197	\$4,537,661
2015*	57	5,215	54	4,958	257	\$6,507,887	\$1,313	\$5,006,565
2016**	65	4,500	65	4,500	0	\$4,500,000	\$1,000	\$4,250,000
2017**	60	4,250	60	4,250	0	\$4,250,000	\$1,000	\$3,000,000
Average	55	4,127	53	4,018	110	\$3,826,475	\$926	\$3,183,049

^{*} Included receipts from 249 acres of timber harvested on county owned land not part of the county forest.

^{**} Estimates.

Periodically, the Forestry and Parks Department manages county owned forest land that is not part of the County Forest. Much of this land was included with the Stewardship grant and will be enrolled in County Forest Law (CFL). However, a few parcels will remain as county owned, without the County Forest designation. When these parcels are managed, sale of wood revenues are designated as non-CFL in the budget. The budget for non-CFL timber sale revenue in 2016 was \$25,000. The budget for 2017 is \$10,000.

The additional forester has given this Department the ability to reach the targeted sustainable timber harvest goal, thus maximizing the value potential of the Forest. Prior to 2011, the average annual establishment of timber sales was just over 3,000 acres. In 2011, the Department established nearly 4,500 acres of new sales and is projecting annual sustainable harvest goals between roughly 4,500 and 5,000 acres. The \$85,000 investment dedicated to the new forester position will generate additional sale of wood revenues ranging from \$1.0 to \$1.5 million per year!

In 2014, the total value of new timber sales was over \$5.2 million! In 2015, new sales reached \$6.5 million! The projection for 2016 is conservative at \$4.5 million. Since 2012, the average total value of new sales is approximately \$4.84 million. Prior to 2011, this Department averaged approximately \$2.36 million in new timber sales per year. That's an increase of over 105%!

As long as markets continue to stay constant (and they will come down a little), the value of new timber sales should average around \$4.25 to \$4.75 million per year. Furthermore, the added sales have the potential to foster new job opportunities and supply local wood product industries with the material they need to maintain productivity.

It takes a while before changes in the timber management program come to fruition. In 2013, we finally started to see returns from the investment in the new forester, by eclipsing the \$3.0 million stumpage revenue mark (for the first time) and nearly reaching \$4.0 million. In 2014, we surpassed \$4.5 million in stumpage revenues. In 2015, we reached \$5.0 million! Projections for 2016 are between \$4.2 and \$4.5 million (estimating \$4.25 million in the budget). The budget for 2017 is a conservative \$3.0 million.

Table 2 displays the budgeted and <u>actual</u> sale of wood revenues since 2007 (the revenues for 2016 and 2017 are estimated):

Table 2: Bayfield County Forest Sale of Wood Revenues

Calendar	Revenues	Revenues	Difference
Year	Budget	Actual	Difference
2007	\$1,705,000	\$2,167,156	\$462,156
2008	\$1,700,000	\$2,621,308	\$921,308
2009	\$1,727,400	\$2,305,259	\$577,859
2010	\$1,820,500	\$2,047,663	\$227,163
2011	\$1,996,000	\$2,477,066	\$481,066
2012	\$2,195,000	\$2,696,756	\$501,756
2013	\$2,400,000	\$3,904,104	\$1,504,104
2014^{a}	\$2,751,565	\$4,537,661	\$1,786,096
2015 ^b	\$3,110,000	\$5,006,565	\$1,896,565
2016	\$2,900,000	\$4,250,000	\$1,350,000
2017	\$3,000,000	\$3,000,000	\$0
Average	\$2,300,497	\$3,183,049	\$882,552

^a Amended budget

^b Amended budget. Includes revenue from county owned land not part of the county forest

Maximizing the potential of the Forest, combined with a very strong market, has sparked these record revenues. The market will eventually stabilize and stumpage prices will come down. In the end, all we can do (all that is really within our control) is continue to reach our sustainable harvest goals and offer high quality sales for competitive bidding.

The new forester position has been in place for over five full seasons. We are now starting to see outputs, as well as revenues, normalize. In general, timber sale contracts are two years in length, with the potential for two one-year extensions. In other words, it can take up to four years before the full value of a timber sale is realized. Work on maximizing the sustainable management of the Forest started in 2011. Assuming constant markets and stable establishment goals, actual revenues from the sale of wood are projected to be around \$3.0 million per year (a very conservative estimate).

Other Revenues: Grants, Aids and Loans

Revenues from other sources, including grants, aids and loans, are estimated to remain relatively stable in 2017.

Table 3 displays total <u>actual</u> revenues received per account type since 2006. Revenues for 2016 and 2017 are estimated:

Table 3: Forest Management Program Revenues per Account Type (2016 & 2017 are estimates)

Table	able 3: Forest Management Program Revenues per Account Type (2016 & 2017 are estimates)									
Year	Sale of Wood ¹	Grants ²	Road Aid	Loans	Permits	Sand/Gravel	Leases	Transfers ³	Other ⁴	Total
2006	\$1,615,584	\$51,536	\$8,037	\$84,548	\$1,160	\$165	\$0	\$0	\$37,948	\$1,798,978
2007	\$2,167,270	\$61,142	\$9,418	\$84,588	\$850	\$5,168	\$0	\$80,230	\$85,354	\$2,494,020
2008	\$2,621,308	\$115,456	\$10,440	\$84,588	\$995	\$3,060	\$0	\$0	\$1,263	\$2,837,110
2009	\$2,305,259	\$87,996	\$12,126	\$84,669	\$553	\$150	\$0	\$0	\$2,309	\$2,493,062
2010	\$2,047,663	\$82,923	\$11,390	\$84,668	\$2,715	\$9,442	\$0	\$0	\$6,629	\$2,245,430
2011	\$2,477,066	\$104,247	\$11,347	\$84,667	\$2,004	\$563	\$7,800	\$0	\$13,655	\$2,701,349
2012	\$2,696,756	\$80,299	\$11,330	\$0	\$1,597	\$19,544	\$8,034	\$0	\$29,309	\$2,846,869
2013	\$3,904,104	\$105,608	\$11,896	\$0	\$2,320	\$0	\$8,275	\$0	\$3,978	\$4,036,181
2014	\$4,561,503	\$65,083	\$11,917	\$0	\$1,090	\$16,500	\$8,523	\$0	\$4,243	\$4,668,859
2015	\$5,006,565	\$2,316,115	\$11,918	\$0	\$1,835	\$0	\$8,779	\$0	\$3,492	\$7,348,704
2016	\$4,265,394	\$154,891	\$11,942	\$0	\$1,000	<i>\$0</i>	\$9,042	\$0	\$8,350	\$4,450,619
2017	\$3,010,000	\$127,986	\$11,942	\$0	\$1,000	\$0	\$9,313	\$0	\$3,000	\$3,163,241
Avg	\$3,056,539	\$279,440	\$11,142	\$42,311	\$1,427	\$4,549	\$4,980	\$6,686	\$16,628	\$3,423,702

¹ Includes revenue from county owned land not part of the county forest.

Revenues from the sale of miscellaneous forest products and permit fees are estimated to be \$1,000. Another significant revenue source is the \$9,313 lease for a communications tower that was constructed on County Forest land.

Numerous miscellaneous competitive grants are applied for throughout the year and have the potential to provide additional significant increases in revenues. The WDNR Sustainable Forestry Grant and Arbor Day Grant are two good examples of grants that have been received mid-budget. In 2015, a Knowles-Nelson Stewardship Land

² CY 2015 includes revenue received from the Knowles-Nelson Steward Grant for land acquisition (\$2,238,000).

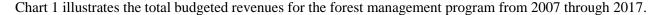
³ From General Fund or Non-Lapsing accounts.

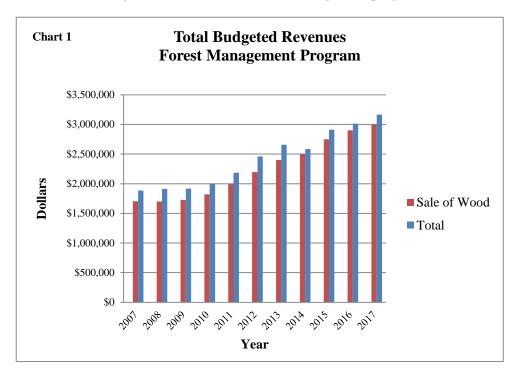
⁴ Includes donations, equipment sales, use agreements, etc.

Acquisition grant was received. This grant was valued at \$2,265,770 and was used towards the purchase of 1,855 acres of forest land (747 acres of county owned, non-CFL lands was also part of the project – totaling 2,602 acres).

Total Revenues: Forest Management Program

In summary, 2017 budgeted sale of wood revenues increased by about 3.5% when compared to 2016. Total budgeted revenues increased by roughly 5% over the same period. The budget for sale of wood revenues has steadily increased over the past 8 years, by nearly 76% since 2007.





Total revenues from the management of the County Forest are projected to be \$3,163,241, nearly 68% greater than budgeted revenues for 2007.

Revenues: Recreation/Parks Program

Parks/Campgrounds

The Forestry Department was assigned the management of all county owned parks in 2011. The four county managed parks include three campgrounds: Twin Bear, Delta Lake and Big Rock; and one day use park: Atkins Lake.

Revenues for the parks come in a variety of forms, including camping (the primary revenue source), boat launch, boat mooring, and kayak/canoe rental, among others. Revenues received from camping account for roughly 88% of the total receipts from the parks program.

Table 4 summarizes the annual revenues per park (2016 and 2017 are estimated):

Table 4: Annual Distribution of Net Revenues for the Parks Program (2016 and 2017 are estimated)

	Twin Bear					Delta Lake			Big Rock			Atkins Lake			C 1		
Year	Camping	Boat Launch	Other*	Total	Camping	Boat Launch	Other*	Total	Camping	Boat Launch	Other*	Total	Camping	Boat Launch**	Other*	Total	Grand Total
2011	\$41,440	\$7,040	\$2,370	\$50,849	\$22,367	\$801	\$42	\$23,210	\$2,812	\$0	\$0	\$2,812	\$0	\$261	\$0	\$261	\$77,131
2012	\$47,855	\$6,163	\$2,430	\$56,448	\$27,080	\$861	\$57	\$27,998	\$3,860	\$0	\$0	\$3,860	\$0	\$215	\$0	\$215	\$88,521
2013	\$44,602	\$5,324	\$2,092	\$52,018	\$18,982	\$912	\$55	\$19,950	\$3,524	\$0	\$0	\$3,524	\$0	\$181	\$0	\$181	\$75,672
2014	\$46,523	\$4,649	\$2,649	\$53,822	\$18,201	\$1,005	\$97	\$19,303	\$3,733	\$0	\$0	\$3,733	\$0	\$689	\$0	\$689	\$77,547
2015	\$48,156	\$6,152	\$2,528	\$56,835	\$18,327	\$981	\$868	\$20,176	\$5,118	\$0	\$0	\$5,118	\$0	\$0	\$0	\$0	\$82,129
2016	\$48,000	\$6,000	\$2,500	\$56,500	\$18,000	\$1,000	\$500	\$19,500	\$4,000	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$80,000
2017	\$48,000	\$6,000	\$2,500	\$56,500	\$18,000	\$1,000	\$500	\$19,500	\$4,000	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$80,000
Avg	\$46,368	\$5,904	\$2,414	\$53,994	\$20,992	\$912	\$224	\$22,127	\$3,809	\$0	\$0	\$3,809	\$0	\$269	\$0	\$269	\$80,200

^{*} Inlcudes boat mooring, boat rental, dump station and shower fees, if applicable.

Camping revenues for 2017 are predicted to stay constant at around \$70,000. However, weather conditions can have a significant impact on potential revenues. The other significant form of parks revenue comes from boat launch and mooring fees, which are predicted to be around \$10,000. Canoe and kayak rentals were added in 2015 and will continue in 2017. Wireless internet was also added in 2015 (at Twin Bear and Delta Lake) and included in the camping fee. Public use boat launch sites are located at Twin Bear, Delta Lake and Atkins Lake.

Camping for 2016 is projected to exceed expectations. However, because weather plays a significant role, it's difficult to forecast future potential. As a result, total park revenues for 2017 are expected to be around \$80,000 (still, a conservative estimate).

Yurts - County Forest

As part of the 2016 budget, the Department was approved to begin the development and construction of two rustic yurts. These yurts are located on county forest land and will provide rustic camping opportunities to the public. One yurt is located in the Town of Bayfield, west of Mt. Ashwabay, and the other is located in the Town of Cable, east of the North End cabin. Both yurts are located adjacent to designated and maintained non-motorized recreational networks and will have direct, four season access to mountain bike, cross-country ski, snowshoe and hiking trails.

The yurts will be available for rent starting the fall of 2016 and both can be rented all year (both include woodstoves and firewood). Initially, as with most projections, rental revenues will be estimated conservatively. Also, each yurt will be subjected to sales and local room tax. Currently, the local room tax for the Bayfield yurt is 6.5%, while the Cable yurt is 4%. Net revenues from the rental of both yurts is expected to be around \$12,000 in 2017. Again, this is a conservative estimate and is based on an occupancy rate of around 25%.

Revenues: Trails Program

The Forestry and Parks Department was assigned the management of the county trails program starting the summer of 2013. This primarily includes the active field management of the county wide, state funded ATV/UTV and snowmobile trail programs. Promotion and advertising of the state funded trail system will still be handled by the Tourism Department, but with direct assistance from Forestry and Parks.

The primary source of revenue for the trails program comes from the State of Wisconsin in the form of maintenance on existing trails.

Table 5 summarizes the total amount of annual maintenance funds received per trail type:

^{**} Starting in 2015, there is no charge for the use of the Atkins Lake boat launch.

Table 5: Mileage and Funding For Trails Managed by Bayfield County

Trail Type	Miles	Rate/Mile	Total
Snowmobile Maintenance	437	\$250	\$109,250
ATV Summer Maintenance	86.75	\$600	\$52,050
ATV Winter Maintenance	168.15	\$100	\$16,815
UTV Maintenance	86.75	\$100	\$8,675
Total			\$186,790

Additional state grants for new trails, or repairs to existing infrastructure, are also applied for annually. Awards are based primarily on available funding and are not guaranteed from year to year. Bayfield County also typically receives a state supplemental snowmobile trail grant every year (if applicable). These grants can be used to help cover the costs of maintaining trails, where routine maintenance has exceeded available funds. Supplemental funds are also subjected to availability, are pro-rated based on the amount requested from other county applications throughout the state and, therefore, are not guaranteed to cover 100% of the overage. Depending on these factors, Bayfield County has seen supplemental requests funded at rates from 60% to 100%.

Most supplemental and new project grants are awarded after the completion of the budget. Budgets are typically amended to reflect the value of awarded new projects. The total estimated revenue budget for trails in 2017 is \$186,790 (which is just the routine annual maintenance amount).

Total Revenues: Forestry, Parks and Trails

Total revenues for the combined management of the forestry, parks/recreation and trails programs are estimated to be \$3,442,531 for 2017. This represents an increase of roughly 4% when compared to the 2016 budget.

Table 6 describes total budgeted revenues per program type from 2007-2017 (2016 and 2017 are estimated).

Table 6: Total Budgeted Revenues Per Program

Calendar Year	Forest Management	Parks ¹	Trails ²	Total	
2007	\$1,885,971	\$0	\$0	\$1,885,971	
2008	\$1,912,971	\$0	\$0	\$1,912,971	
2009	\$1,918,763	\$0	\$0	\$1,918,763	
2010	\$1,999,655	\$0	\$0	\$1,999,655	
2011	\$2,183,591	\$87,250	\$0	\$2,270,841	
2012	\$2,458,679	\$80,000	\$0	\$2,538,679	
2013	\$2,302,392	\$80,000	\$352,878	\$2,735,270	
2014	\$2,584,142	\$80,000	\$195,465	\$2,859,607	
2015	\$2,910,204	\$83,000	\$272,832	\$3,266,036	
2016	\$3,013,180	\$84,000	\$220,385	\$3,317,565	
2017	\$3,163,241	\$92,500	\$186,790	\$3,442,531	
Average	\$2,393,890	\$83,821	\$245,670	\$2,723,381	

¹ Starting in 2016, includes revenue from two yurts.

 $^{^{2}}$ 2013 figure included already approved new construction grants when transferred to Forestry.

Due to a variety of reasons, sale of wood revenue has traditionally been estimated conservatively. As a result, actual revenues have routinely exceeded the budget, oftentimes significantly. From 2007 through the estimate for 2016, the actual sale of wood revenues has exceeded budgeted revenues by an average of nearly 60%, with 2013, 2014, 2015 and 2016 (predicted) generating substantial surpluses (see Table 2).

As stated earlier, the reason to estimate conservatively is due to the long term nature of timber sale contracts and instabilities in wood markets. To budget accurately, we are projecting when a sale will be harvested (at some point over, potentially, a four year period) and forecasting market conditions at the time when future sales are sold. Both predictions combine elements of risk and probability, hence the conservative estimates.

With that said, since 2007, we have steadily increased budgeted sale of wood revenues. From 2007 through 2017, budget revenues for the forest management program have increased by nearly 68%. Sale of wood revenues have increased by an average of roughly \$166,000 per year since 2010. At \$3,442,531, total forest management budgeted revenues for 2017 are the highest level to date. As we move past \$3.0 million in budgeted sale of wood revenues (\$3.0 million for 2017), the margin for error will significantly decrease and the potential to generate less than the budget will increase.

Expenditures: Forest Management Program

The forest management program accounts for the vast majority of total expenses within the Department. The most significant expenses include personnel, general operating costs associated with managing the 172,000 acre County Forest, reforestation, and payments to each Township that contains County Forest acreage.

Personnel Expenses

The most significant expense incurred by the Forestry and Parks Department is personnel. In the summer of 2013, the Trails Program was moved from Tourism to Forestry and Parks. As part of the move, the Department created a new full time position – Recreation Forester. The Department now consists of 9 full time positions including: 4 foresters, 1 recreation forester, 1 forest technician, 1 office manager, 1 assistant administrator and 1 administrator (note: nearly half of the administrator's salary and benefits are reimbursed to the county by the Wisconsin DNR, through the County Forest Administrator grant).

Aside from the additions of new full time staff, the cost of health insurance has been the biggest contributor to the increase in personnel expenses. Since 2007, the total cost of health insurance within the Department has increased by over 90%. Some of the increase is a result of adding the two new full time positions since 2011 and some is related to changes in family status within the Department (moving from an individual plan to a family plan increases the cost of insurance by nearly \$15,000 per occurrence).

In 2017, total personnel expenses, which include wages, health insurance, retirement, FICA/Medicare, HRA and Committee per diem, are expected to be around \$771,000, an increase of 2.75% from 2016.

Township Payments

The second most significant recurring budgeted expense(s) are combined payments to towns. Townships that contain County Forest acreage receive a state mandated payment equal to ten (10) percent of net revenues generated from the sale of wood on County Forest lands. The distribution of this money is based solely on the percentage of acreage contained within each township. The payment for 2015 was a record at nearly \$500,000. Estimated total payments to the towns are projected to be \$425,000 in 2016 and \$300,000 in 2017.

Table 7 describes the total average annual payments received by each township that contains Bayfield County Forest acreage. DNR PILT payments (payment in lieu of taxes) are made directly by the State of Wisconsin to each town (at a rate of \$0.30/acre) and were included in this table to display the total direct net revenues received by each township that contains County Forest acreage.

Table 7: Average Annual Revenues per Township (2010-2016)

Tr 1. *	County Forest	Avg. Bayfield County	DNR PILT	Avg. Bayfield County	Total Avg. Annual
Township	Acreage	10% Timber Sales	Payments (\$0.30/ac)	Town Road Aids	Compensation
Barnes	40,540	\$82,802.80	\$12,162.11	\$6,436.51	\$101,401.42
Bayfield	32,793	\$68,701.53	\$9,837.77	\$6,603.01	\$85,142.30
Bayview	13,151	\$27,204.52	\$3,945.44	\$4,663.17	\$35,813.13
Bell	14,585	\$30,556.13	\$4,375.51	\$3,780.60	\$38,712.24
Cable 5,556		\$11,640.69	\$1,666.90	\$1,964.29	\$15,271.87
Clover	5,387	\$11,285.08	\$1,615.97	\$2,684.67	\$15,585.72
Hughes	24,685	\$50,621.19	\$7,405.56	\$3,847.50	\$61,874.24
Iron River	6,042	\$12,658.52	\$1,812.67	\$2,714.29	\$17,185.48
Namakagon	547	\$1,351.08	\$164.04	\$0.00	\$1,515.12
Orienta	4,720	\$9,888.57	\$1,416.00	\$3,049.71	\$14,354.29
Port Wing	8,876	\$18,595.77	\$2,662.85	\$2,515.43	\$23,774.05
Russell	8,571	\$17,956.19	\$2,571.25	\$1,982.14	\$22,509.58
Tripp	6,540	\$13,700.43	\$1,961.86	\$4,741.71	\$20,404.00
Total	171,993	\$356,962.51	\$51,597.92	\$44,983.02	\$453,543.44

As part of the large Knowles-Nelson Stewardship land acquisition project in 2015, county forest land was added to a variety of towns. Of the 2,602 acres added to the county forest, roughly 1,220 was located in the Town of Barnes, 630 acres in the Town of Hughes, and 200 acres in the Town of Bayview. In addition, approximately 547 acres was added to the Town of Namakagon, which, previously, did not contain county forest land.

In 2010, the Department adopted a Town Road Improvement Aid program. This program appropriated 1% of the total sale of wood revenues to town road improvement projects (triggered when actual revenues exceed budgeted revenues by 1%). In 2014, the Forestry and Parks Committee increased this fund to 2% of the sale of wood revenues. A little over \$80,000 worth of town road projects were approved in 2015 and again in 2016. It is estimated that \$80,000 will be earmarked for 2017 projects.

Combined with the share of record revenues received in 2015, the county distributed over \$570,000 to the townships in 2015, an increase of over 3.5 fold when compared to 2006 (roughly \$162,000).

The total county payment to townships is expected to be roughly \$505,000 in 2016 and \$380,000 in 2017 (again, a conservative estimate).

Reforestation

Bayfield County maintains one of the largest public land reforestation programs in the state. Reforestation expenses come in a variety of forms including planting, seeding, release, site preparation, and, on occasion, seedling protection. The treatment of invasive species has also been recently added to the list.

Total reforestation expenses for 2017 are estimated to be \$145,000. This represents a decrease of about 20% when compared to budgeted costs in 2016. Roughly \$85,000 of the reforestation budget is for planting, seeding and site preparation related expenses. Approximately \$40,000 is for the control of invasive species (primarily on forest roads in the Barrens area), though all or a portion of this expense may be covered by a WDNR Sustainable Forestry grant (which was used to fund the first round of spotted knapweed control in the Barrens area). The remaining expenses are for plantation release and seedling protection.

Operating Expenses

Operating expenses are projected to be nearly \$236,000 for 2017, an increase of approximately 20% when compared to the estimated expenses for 2016. Additional expenses for the Good Neighbor Authority agreement (which are offset by added revenue) and the completion of previously approved grants (which are also offset by added revenue) are the biggest reasons for the increase.

The most significant operating expenses include mileage for the fleet of vehicles, materials and supplies for the establishment of timber sales, utilities for the garage, data processing and office supplies, repair, maintenance and improvements of roads and trails, repair and maintenance of field equipment, the expenditure of numerous grants and loans, publications, subscriptions, dues and professional development.

Total Expenses: Forest Management Program

Total forest management program expenses are estimated to be \$1.53 million in 2016. This represents an increase of 4.8% when compared to the adopted 2016 budget. Good Neighbor Authority expenses, mandatory payments to the towns, road and trail related expenses and personnel expenses are the primary reasons for the increase.

Table 8 displays total <u>actual</u> expenses incurred per account type since 2006 (2016 and 2017 are estimated):

Table 8: Forest Management Program Expense Summary per Account Type

Year	Personnel ¹	Operating	Reforestation	Town Payment ²	Loans	Land Purchase	Total
2006	\$423,646	\$134,827	\$152,369	\$161,558	\$84,548	\$0	\$956,948
2007	\$440,632	\$117,764	\$153,453	\$216,830	\$84,588	\$358,325	\$1,371,592
2008	\$463,030	\$176,453	\$81,453	\$270,636	\$84,588	\$114	\$1,076,274
2009	\$479,696	\$96,838	\$157,117	\$231,083	\$84,669	\$0	\$1,049,403
2010	\$475,294	\$96,021	\$133,148	\$218,339	\$84,668	\$0	\$1,007,470
2011	\$588,787	\$124,533	\$149,697	\$277,033	\$84,667	\$0	\$1,224,717
2012	\$608,110	\$135,334	\$115,304	\$290,808	\$0	\$50,000	\$1,199,556
2013	\$655,895	\$142,207	\$92,486	\$418,674	\$0	\$0	\$1,309,261
2014	\$705,295	\$100,595	\$96,289	\$533,684	\$0	\$20,000	\$1,455,863
2015	\$714,068	\$136,781	\$134,095	\$572,143	\$0	\$2,614,447	\$4,171,534
2016	\$750,228	\$185,929	\$165,000	\$505,000	\$0	\$0	\$1,606,157
2017	\$770,842	\$235,955	\$145,000	\$380,000	\$0	\$0	\$1,531,797
Average	\$537,821	\$124,952	\$130,037	\$290,961	\$42,311	\$253,574	\$1,496,714

¹ Inlcudes wages, insurances, retirement, FICA/Medicare, HRA, and Committee Per Diem.

Expenses: Parks Program

Expenses relating to the management of the parks program are far less than those associated with managing the county forest. Primary expenses include contractual services for the caretaking of the grounds and facilities, waste management (garbage removal), utilities (electric and propane) and repair and maintenance. Contractual services are the largest parks management expense.

Repair and maintenance of the two county forest yurts were added to the 2017 budget. These expenses are estimated to be approximately \$4,000 in 2017. Expected expenses for the maintenance of the yurts are: firewood (for the woodstoves), trail passes, permit fees and general supplies and repairs.

² Towns which contain county forest land receive a prorated 10% share of total sale of wood revenues. Starting 2010, also includes payments from Town Road Aid program.

Table 9 displays the annual budgeted expenses for the parks program since 2011.

Table 9: Annual Budgeted Expenses For the Parks Program

Year	Contractual Services Utilities		Repair & Maintenance ¹	Other ²	Total	Actual ³
2011	\$22,500	\$10,550	\$10,000	\$830	\$43,880	\$42,205
2012	\$30,700	\$9,650	\$12,000	\$1,175	\$53,525	\$55,826
2013	\$31,270	\$10,125	\$12,000	\$1,400	\$54,795	\$53,839
2014	\$32,543	\$10,625	\$12,000	\$1,400	\$56,568	\$50,655
2015	\$35,000	\$14,525	\$12,000	\$1,400	\$62,925	\$54,956
2016	\$35,000	\$11,950	\$11,000	\$1,400	\$59,350	\$57,650
2017	\$34,000	\$11,650	\$14,000	\$1,350	\$61,000	\$61,000
Average	\$31,169	\$11,095	\$11,500	\$1,241	\$55,005	\$53,733

¹ Yurt related expenses added for 2017

The caretaking of the facilities and grounds, as well as hosting and managing reservations are all duties performed by contractors. The estimated cost of these services is \$34,000 in 2017. The repair and maintenance of all four parks and two yurts, as well as all utilities, communications and miscellaneous fees are estimated to be approximately \$27,000. Total expenses for 2017 are estimated to be \$61,000, an increase of roughly 3% from 2016. Again, the primary reason for the increase is the repair and maintenance expenses for the new yurts.

Expenses: Trails Program

The management of the trails program primarily involves maintaining existing motorized trail networks. In a nutshell, this basically means utilizing the annual allocation of maintenance funds provided by the State of Wisconsin, with expenditures offsetting revenues. Occasionally, new grants are awarded for the construction of new trails or major repairs to existing ones (trail rehabilitation). In the past, expenditures equaled revenues on all new construction or trail rehabilitation grants. However, new legislation may require additional contributions on all future new construction or rehabilitation grants. This could mean a significant future expenditure on anything other than basic trail maintenance.

Total expenditures for 2017 are estimated to equal revenues: \$186,790 (see Table 5). All new construction or rehabilitation grants, as well as any supplemental grants, are typically awarded after the budget is approved, and, if necessary, would require a budget amendment.

Over the past few years, the Department has made it a priority to maximize the potential of the county forest. This goal was multi-faceted, as the county forest provides a myriad of different benefits. Phase one of the internal goal was accomplished a few years ago. Various components were analyzed and direction established to better capture the true sustainable potential of all forest management programs. The result: a sustainably managed forest that is generating over \$2.0 million more in stumpage revenues when compared to accomplishments prior to the adjustments.

County forests were established primarily to optimize production of forest products. Again, we accomplished this goal a few years ago. Maximizing the sustainable timber management potential not only benefits the county directly through timber sale receipts, but also provides raw forest products to local and regional businesses. In general, every \$1.00 generated by the county through stumpage revenue stimulates an additional \$27.00 within local and regional economies.

² Printing and Permit Related Expenses

³ 2016 and 2017 are estimated.

Other uses, like recreation, are also recognized as important functions of the county forest. Recently, the Department began increasing efforts to improve and/or expand recreational opportunities on the county forest. The yurt projects and improvements to the Lost Creek Falls hiking trail are two good examples. Since improving the Lost Creek Falls trail, we have seen a twenty-fold increase in use, from around 10 users a week to approximately 200 per week. Improving recreational opportunities has some direct benefits to the county i.e. revenues from the new yurt projects, but most of the benefit derived from recreation is indirect.

Improved recreational access has the potential to attract users and draw people to certain areas. The better the attraction and experience, the more use an area will get. If we provide enough good recreational opportunities, areas will start to attract those interested in recreation based day trips or vacations. More use has the potential to increase spending (which benefits local communities), which increases sales tax revenue and thus directly benefits the county.

Obviously, recreational opportunities reach beyond the economic potential. It provides opportunities for individuals and families, whether local or transient, to get out and enjoy our beautiful natural resources. And there's a lot to enjoy, as with nearly 500,000 acres of public land, Bayfield County has more public forests than any other county in Wisconsin.

Increases in recreation also creates additional challenges. As previously stated, county forests were established to optimize the potential of forest products. Those who choose to recreate on the county forest will see timber management. The interaction between recreation and timber management is a good thing, as it's important for everyone to better understand where our insatiable demand for wood products comes from. The challenge will be to establish better ways to communicate the goals and objectives of our forest management program and provide educational opportunities to those recreating near harvested areas. Informational signs or kiosks along well used trails will be one way to start the process.

The 2017 budget includes \$50,000 for trail maintenance and development. This is a significant increase from the \$20,000 budgeted in 2016, but reflects the commitment to improve, develop and maintain recreational opportunities on the county forest.

Total Expenditures: Forestry, Parks and Trails

Total expenses for the combined management of the forestry, parks and trails programs are estimated to be approximately \$1.78 million for 2017. This represents an increase of roughly 2.5% when compared to the 2016 budget.

Since 2011, expenses pertaining to the management of the County Forest have increased approximately 29%. The additional position (recreation forester added in June 2013), increases in personnel costs, increases in reforestation expenses and larger payments to Townships (as per 10% revenue sharing and increases in the Town Road Aid fund) all contribute to this overall increase.

Park expenses remain relatively stable, but trail costs are largely associated with awarded grants. Trail expenses are based on the total value of the annual maintenance funds, as well as any other previously awarded grant that was not expended during the previous year. Trail grants are typically zero sum items in the budget, meaning revenues offset expenditures (as with most grants), but they still contribute to the overall bottom line.

Table 10 describes the total amended budgeted expenses for the Forestry and Parks Department per program type since 2007 (2016 and 2017 are estimated).

Table 10: Total Budgeted Expenses per Program^a

Year	Forest Management	Parks	Trails	Total
2007	\$924,556	\$0	\$0	\$924,556
2008	\$998,087	\$0	\$0	\$998,087
2009	\$1,014,215	\$0	\$0	\$1,014,215
2010	\$1,094,396	\$0	\$0	\$1,094,396
2011	\$1,185,817	\$43,880	\$0	\$1,229,697
2012	\$1,174,522	\$53,525	\$0	\$1,228,047
2013	\$1,238,210	\$54,795	\$352,878	\$1,645,883
2014	\$1,471,740	\$56,568	\$196,965	\$1,725,273
2015 ^b	\$4,265,325	\$62,925	\$272,832	\$4,601,082
2016	\$1,453,069	\$59,350	\$220,385	\$1,732,804
2017	\$1,531,797	\$61,000	\$186,790	\$1,779,587
Average	\$1,486,521	\$56,006	\$245,970	\$1,788,497

^a Amended budget.

Capital Expenditures: Forestry, Parks and Trails

Capital expenditures are tracked separately from dedicated Forestry accounts, but still contribute to the overall bottom line of the budget.

Table 11 displays the total budgeted and actual capital expenditures since 2007 (2016 and 2017 are estimated):

Table 11: Total Capital Expense¹

Year	Budget	Actual		
2007	\$150,000	\$150,000		
2008	\$0	\$1,600		
2009	\$14,400	\$4,821		
2010	\$0	\$1,199		
2011	\$15,500	\$41,815		
2012	\$41,700	\$31,941		
2013	\$115,250	\$36,994		
2014	\$354,438	\$349,848		
2015	\$87,506	\$96,299		
2016	\$78,100	\$78,100		
2017	\$365,200	\$365,200		
Average	\$111,099	\$105,256		

¹ Amended budget.

The capital expenses were included to show the total impact of the Forestry and Parks Department on the overall county budget.

^b Includes Knowles-Nelson Stewardship Land Acquisition Amendment.

Net Returns: Forestry, Parks and Trails

Budgeted net returns (or net deposits into the county general fund) for 2017 are expected to surpass \$1.66 million, an increase of nearly 5% over the budgeted amount for 2016. This also represents a 60% increase from the average budgeted net returns prior to 2011.

Actual net revenues for 2016 are expected to be around \$2.9 million. This is less than the actual net returns for 2014 and 2015 (both record breaking stumpage revenue years), but still over \$1.3 million more (82%) than the budgeted amount. It is also worth noting that the average actual total net return since 2013 (\$3.03 million) is nearly \$1.7 million dollars greater than the average actual net return prior to 2012 (\$1.37 million).

Also, as previously stated, anticipated stumpage revenues for 2016 are still being conservatively estimated (\$4.25 million). Actual net revenues could be considerably higher, possibly even reaching the \$5.0 million range by the end of the year. If that happens, actual net revenues would approach or exceed \$3.0 million (roughly double the budgeted amount).

Nearly all of this increase is attributed to another solid year in sale of wood revenues, associated with very strong markets for new timber sales (see Table 1). If we continue to see above average prices on new timber sales and continue to sell \$4.5 to \$5.0+ million in new sales per year, actual annual stumpage revenues should stay relatively constant (low to mid \$4.0 million). Again, the unpredictability of this actually happening is what drives the conservative future estimates.

Table 12 best communicates the overall impact of the Forestry and Parks Department on the county budget: the total budgeted and actual net returns (excluding capital) from the Forestry, Parks and Trails programs from 2007 through 2017 (2016 and 2017 are estimated).

Table 12: Total Budgeted and Actual Net Returns

	Bu	dgeted Net R	eturns	A	ctual Net Ret	urns	Difference
Year	Revenues	Expenses	Total Return	Revenues	Expenses	Total Return	Actual - Budget
2007*	\$1,885,971	\$924,556	\$961,415	\$2,494,020	\$1,521,594	\$972,427	\$11,012
2008	\$1,912,971	\$998,087	\$914,884	\$2,837,111	\$1,077,874	\$1,759,236	\$844,352
2009	\$1,918,763	\$1,014,215	\$904,548	\$2,499,613	\$1,060,775	\$1,438,838	\$534,290
2010	\$1,999,655	\$1,094,396	\$905,259	\$2,234,054	\$1,008,669	\$1,225,385	\$320,126
2011	\$2,270,841	\$1,229,697	\$1,041,144	\$2,784,930	\$1,315,186	\$1,469,744	\$428,600
2012	\$2,540,449	\$1,228,047	\$1,312,402	\$2,935,390	\$1,255,077	\$1,680,314	\$367,912
2013	\$3,099,116	\$1,645,883	\$1,453,233	\$4,505,756	\$1,720,635	\$2,785,121	\$1,331,888
2014	\$3,111,172	\$1,725,273	\$1,385,899	\$4,958,924	\$1,719,686	\$3,239,239	\$1,853,340
2015**	\$6,153,830	\$4,601,082	\$1,552,748	\$7,730,302	\$4,526,088	\$3,204,214	\$1,651,466
2016	\$3,317,565	\$1,732,804	\$1,584,761	\$4,779,536	\$1,884,637	\$2,894,899	\$1,310,138
2017	\$3,442,531	\$1,779,587	\$1,662,944	\$3,442,531	\$1,779,587	\$1,662,944	\$0
Average	\$2,877,533	\$1,633,966	\$1,243,567	\$3,745,652	\$1,715,437	\$2,030,215	\$786,648

^{*} Included land acquisition expenses.

In summary, efforts made to maximize the sustainable management of the county forest, combined with relatively consistent, strong timber markets have resulted in net revenue deposits that are nearly 2.5 times greater than what they were just five short years ago.

^{**} Included \$2.265 million Stewardship revenue & \$2.62 million land acquisition expense.

PERFORMANCE INDICATORS

The Bayfield County Forestry and Parks Department manages approximately 172,000 acres of County Forest land, 4 county parks, 2 rustic yurts, 437 miles of state funded snowmobile trails, 87 miles of state funded ATV/UTV trails and 168 miles of state funded winter ATV trails, in addition to a plethora of other recreational responsibilities.

The forest management program is one of the most significant responsibilities of the Department and will be the primary focus throughout the rest of this section.

In general, there are three major facets of the forest management program:

- 1. Forest management (timber sale establishment).
- 2. Reforestation.
- 3. Forest reconnaissance.

The quality and quantity of primary goal accomplishments, the sold value of new timber sales and annual stumpage revenues received are some of the best indicators used to evaluate performance.

Accomplishments are some of the best ways to measure performance. Below is the Forestry and Parks Department accomplishment report for CY 2015.

FOREST MANAGEMENT

The forest management program is one of the most significant responsibilities of the Department and one of the largest (and in many years, the largest) of any County Forest program in the state. There are three major facets of the program: 1) forest management (primarily timber sale establishment), 2) reforestation, and 3) forest reconnaissance. The quality and quantity of goal accomplishments, as well as the sold value of timber sales, are some of the best indicators used to evaluate performance. Below are summaries of the major forest management priorities.

1) <u>Sustainable Timber Harvest Goals:</u> sustainable timber harvest goals for every major forest type are calculated based upon sound silvicultural guidelines and principles.

Table 1 displays the sustainable harvest goals and accomplishments of the timber sale program by major forest type since 2009.

Table 1: Davileiu County Poiest Sustaniable Harvest Goals and Accombisinients (acres	County Forest Sustainable Harvest Goals and Accomplishments (acres)
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Species	2	009	2	010	2	011	2	012	20	013	20	14	20)15	Ave	erage
5 pecies	Goal	Accomp.														
Aspen ¹	850	928	870	853	1,189	1,191	1,005	1,230	1,170	1,151	1,265	1,314	1,300	1,292	1,093	1,137
Nor. Hdwd	900	721	900	418	914	973	1,321	1,349	970	1,069	900	857	835	804	963	884
Red Oak	670	554	670	607	808	798	763	577	795	680	700	981	820	823	747	717
Paper Birch	200	16	200	156	200	38	100	132	50	15	90	131	40	53	126	77
Scrub Oak	85	15	85	167	85	188	140	142	215	254	205	275	250	247	152	184
Red Pine	749	572	870	743	978	987	991	917	900	952	880	811	855	1,041	889	860
Jack Pine	405	413	540	518	516	480	504	493	275	274	190	182	165	194	371	365
White Pine	50	76	50	15	50	35	100	93	120	169	120	127	100	97	84	87
Fir/Spruce	100	33	100	180	100	140	60	25	130	119	40	36	40	44	81	82
Swamp Conifer ²	0	0	0	0	142	160	130	138	140	141	120	54	130	98	95	84
Swamp Hdwd. ²	0	0	0	0	126	0	120	87	50	41	110	74	110	88	74	41
Total	4,009	3,328	4,285	3,657	5,108	4,990	5,234	5,183	4,815	4,865	4,620	4,842	4,645	4,781	4,674	4,521

¹ Greater accomplishments are a result of managing some of the backlog

A total of 4,781 acres of County Forest was managed in 2015. This represents an increase of roughly 35% when compared to the average accomplishments prior to 2012. The significant increase in accomplishment is a direct result of adding a new forester position in 2011.

 $^{^{2}}$ Timber types included in goals starting in 2011

On occasion, the Department also manages County owned land that is not part of the County Forest. In 2015, a total of 43 acres were managed on County owned, non-County Forest lands.

In general, most of the harvest goal is in the form of a timber sale, however, there are occasions when a stand is updated and managed at a later date. Updates typically occur when a stand has not attained the predicted amount of growth in between harvests, when the data describing the stand is incorrect, or when the stand is removed from management due to a restrictive feature i.e. riparian buffers or inoperable slopes.

On average, approximately 90% of total accomplishments are in the form of a timber sale. In 2015, roughly 90% of the total accomplishment acres were timber sales.

Table 2 displays a summary of the accomplishments for the sustainable timber harvest program.

Table 2: Bayfield County Forest Sustainable Harvest Summary (acres)

Year	Management	Timber Sale	Stand	Total
1 cai	Goal	Establishment	Update ¹	Accomplishments
2008	3,511	2,736	573	3,309
2009	4,009	3,157	243	3,400
2010	4,285	3,331	326	3,657
2011	5,108	4,491	499	4,990
2012	5,234	4,588	595	5,183
2013	4,815	4,348	517	4,865
2014	4,620	4,331	511	4,842
2015	4,645	4,289	492	4,781
Average	4,528	3,909	470	4,378

¹ Stands are updated, in part, due to inaccuracies in the data or insufficient growth for management.

2) <u>Timber Sale Program:</u> Bayfield County offers two timber sale lettings per year, one in the spring and one in the fall.

Table 3 displays the summary of timber sale offerings since 2008, including the total number of sales sold per year, total acres, the total value of the winning high bids, the average bid value per acre and total revenues received from the sale of timber during each calendar year.

Table 3: Bayfield County Forest Timber Sale Summary

Calendar	Sales	Acres	Sales	Acres	Acres	Timber Sale	Bid Value	Timber
Year	Offered	Offered	Sold	Sold	Not Sold	Bid Values	per Acre	Revenues
2008	58	3,546	55	3,507	39	\$2,381,513	\$679	\$2,621,308
2009	45	3,297	42	3,100	197	\$2,510,601	\$810	\$2,305,259
2010	40	3,218	40	3,218	0	\$2,404,178	\$747	\$2,047,663
2011	54	4,156	54	4,156	0	\$3,629,330	\$873	\$2,477,066
2012	53	4,782	53	4,782	0	\$4,900,194	\$1,025	\$2,696,756
2013	54	4,275	53	4,177	98	\$3,614,091	\$865	\$3,904,104
2014	61	4,388	61	4,388	0	\$5,252,530	\$1,197	\$4,537,661
2015*	57	5,215	54	4,958	257	\$6,507,887	\$1,313	\$5,006,565
Average	53	4,110	52	4,036	74	\$3,900,041	\$939	\$3,199,548

 $^{*\} timber\ revenues\ include\ receipts\ from\ 249\ acres\ of\ timber\ harvested\ on\ county\ owned\ land\ not\ part\ of\ the\ county\ forest.$

Timber revenues were at an all-time high in 2015. The total revenue from harvested timber on County Forest Land was \$5,006,565 (the most of any County Forest program in Wisconsin). This was an increase of over 10% when compared to 2014 (which was the previous record for revenues), an increase of over 28% from 2013 and over double (112%) when compared to the average stumpage revenues received prior to 2012. Total revenues for 2015 also include \$13,506 in stumpage on County land not part of the County Forest.

In 2015, the Department awarded 54 new timber sale contracts, covering 4,958 acres with an estimated value of \$6,507,887 (also the most of any County Forest program in Wisconsin). Of the total acres sold in 2015, 249 were located on County land not part of the County Forest. The total acres sold increased by approximately 13% when compared to 2014 and 19% when compared to 2013. The average winning bid values per acre were nearly 140% higher when compared to the average prior to 2012.

Table 4 displays the total volume of timber harvested from Bayfield County Forest timber sales from 2009 through 2015. Pulp (cords) and logs (Mbf – thousand board feet) are displayed for each primary timber type. For the sake of comparison, all tonnage sales (chips) were converted to cords (approximately 20% off all timber sales are sold by the ton). The table also displays the total amount of timber sale revenue received each year.

Table 4: Bayfield County Forest Timber Harvest Volume Summary (pulp in cords and logs in thousand board feet)

C	200)9	201	10	201	11	20	12	20	13	201	14	201	15	Ave	rage
Species	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs
Aspen	15,048	0	15,041	3	14,570	0	14,647	1	20,288	0	26,154	0	23,486	0	18,462	1
Mx. Hardwood ¹	19,487	182	18,465	261	19,061	212	13,316	129	17,960	377	25,238	506	23,705	561	19,604	318
Oak	6,678	516	9,807	782	11,334	1,221	7,916	1,127	10,796	1,293	18,162	2,439	14,004	2,103	11,242	1,354
Paper Birch	901	7	736	43	766	13	1,083	22	1,169	17	562	9	383	6	800	17
Basswood	1,204	525	1,439	116	1,197	135	1,022	62	1,801	252	1,538	130	2,012	372	1,459	228
Red Pine	6,692	0	4,554	0	8,873	16	10,694	0	14,637	0	13,266	0	10,637	0	9,907	2
Jack Pine	8,410	0	6,572	0	4,533	0	5,352	0	11,211	0	5,715	0	5,633	0	6,775	0
White Pine	715	0	651	0	137	0	48	0	2,083	0	460	0	630	0	675	0
Other Conifer ²	500	0	302	0	669	0	465	0	1,079	0	2,227	0	2,533	0	1,111	0
Total	59,633	1,230	57,566	1,205	61,139	1,597	54,543	1,341	81,024	1,939	93,321	3,084	83,023	3,042	70,036	1,920
Revenue	\$2,305	5,259	\$2,047	7,663	\$2,477	7,066	\$2,69	6,756	\$3,90	4,104	\$4,534	1,831	\$5,000	5,565	\$3,28	1,749

¹ Maple, yellow birch, ash

In summary, 2015 was another exceptional year for timber harvested on the County Forest. Roughly 83,000 cords and 3,000 MBF were harvested. Logs removed were nearly identical to the previous year, but pulp was down by around 9%. However, revenues were 10% greater in 2015. Aspen prices were at an all-time high in late 2014 and early 2015. Many of these sales were harvested in early 2015, which accounts for much of the differences in revenues.

The total volume harvested in 2015 was approximately 44% greater than the average total volume harvested prior to 2012. Harvested cordwood volumes for basswood and other conifers were at all-time highs. Log volumes (and revenues) continue to be driven primarily by red oak.

3) Reforestation Program: reforestation, be it natural or artificial, is a core building block of forest sustainability and a fundamental component of any forest management program. A successful reforestation program provides numerous benefits, some of which include: the restoration of forest productivity, fertility and environmental function; the assurance of a perpetual, sustainable supply of forest resources and amenities for future generations; the protection of soil and water quality; and the establishment and development of quality wildlife habitat. Newly regenerating stands are monitored 3 to 4 times over a 10 year period to determine success.

² Spruce, Fir, Tamarack

Table 5: Bayfield County Forest Reforestation Program Summary 2008 - 2015 (acres)

3 7		Pla	nting		Seeding		Site Prepa	ration			Main	ntenance	;	Monitoring
Year	Red Pine	Jack Pine	White Pine	Other ¹	Jack Pine	Trench	Fire Plow	Scarify	Spray	Fire	Spray	TSI ²	Bud Cap	Regen
2008	378	207	24	0	0	796	88	0	442	0	0	0	0	1,683
2009	487	415	0	0	0	726	72	0	348	40	0	0	0	2,652
2010	367	196	0	0	0	363	118	0	420	42	305	0	0	2,183
2011	319	153	35	68	0	900	88	0	186	21	324	0	0	1,424
2012	295	107	274	0	0	0	177	120	727	32	609	0	0	2,736
2013	281	174	92	0	558	264	0	40	0	0	449	0	239	2,522
2014	0	0	0	0	0	503	20	115	264	0	273	0	239	2,929
2015	62	0	129	0	202	717	0	99	634	0	0	1	239	2,337
Avg.	266	143	62	8	128	524	63	53	378	15	243	5	103	2,330

¹ In 2011, tamarack and white spruce.

a) Planting and Seeding: planting resumed in 2015 after a temporary lull in 2014. In total, 62 acres were planted with red pine and 129 acres were underplanted with white pine. Red pine was planted at a rate of about 750 seedlings per acre, while white pine was planted at about 450 seedlings per acre. All seedlings were 2-0 containerized stock and planted by contracted crews.

A total of 202 acres were seeded with jack pine in 2015. Seeding occurs at a rate of about 4 ounces per acre (with local seed purchased from the WDNR nursery). Application is done aerially via a contract with the DNR. All seeded acres were previously trenched and sprayed to provide the best possible site for germination and recruitment. Roughly half of the seeded sites were double trenched in an attempt to expose a larger amount of bare mineral soil and increase rates of germination. These sites will be monitored to determine effectiveness.

- b) <u>Site Preparation:</u> to get sites ready for future planting or seeding, 717 acres were power trenched and 99 acres were scarified with a dozer and straight blade. Most of the scarification was accomplished with assistance from the DNR. Scarification occurred underneath an existing canopy of mature red oak to facilitate natural oak regeneration.
- c) <u>Maintenance</u>: in 2015, 0 acres were released from undesirable competition. Currently, most plantations are treated with herbicide prior to planting, which, in combination with mechanical preparation, creates an exceptional site for young seedlings to develop. In some instances, release may still be required. However, the goal is to significantly reduce the need for release by treating future plantations prior to planting. Releasing young seedlings increases the risk of damage from herbicide, something we hope to eliminate by treating sites prior to planting.

Also, 239 acres of young jack pine plantations were treated with terminal bud caps to deter browsing from white tailed deer. Assuming browsing pressure remains high in these stands, bud capping may be necessary every year for the next three or four years (or until trees have developed beyond the reach of white tailed deer).

One acre of a previously planted white pine site was treated with hand power tools to reduce undesirable competition (termed TSI). TSI may become a more prevalent means of controlling undesirable saplings, especially in regenerating red oak and northern hardwood stands where competition from ironwood can be a limiting factor.

d) Monitoring: nearly 2,500 acres of previous regeneration attempts were monitored in 2015. This includes both artificial (planted or seeded) and natural regeneration. Most of the monitoring in stands regenerating naturally occurs in red oak and northern hardwood types. These types typically require additional inputs to improve regeneration success or have specific treatments (or greater odds competing undesirable saplings) that require more thorough monitoring. Two deer exclusions fences are also maintained to monitor the effects of deer browsing on regenerating red oak, paper birch and white pine.

² Timber Stand Improvement - Hand release of established regeneration

4) <u>Forest Reconnaissance Program:</u> forest reconnaissance, or updating stand information, is also a vital component of the forest management program. Accurate, up-to-date stand information is essential in the development of viable short and long term sustainable harvest goals. The accuracy of any sustainable harvest goal is only as good as the data from which it was derived. Therefore, it is important to update a certain level of stand information on an annual basis.

Table 6 displays the summary of compartment/stand updates from 2009 through 2015.

Table 6: Bayfield County Forest Inventory (acres)

Year	Goal	Accomplishment
2008	17,000	9,807
2009	10,000	2,872
2010	10,000	4,079
2011	10,000	9,728
2012	10,000	8,135
2013	10,000	9,316
2014	10,000	8,552
2015	12,500	16,868
Average	11,188	8,670

Prior to 2014, the primary goal was to update stand information on a compartment level basis. The target has traditionally been 10,000 acres per year, with the goal of completing the inventory process every 15 to 16 years.

Starting in 2014, the decision was made to focus some of the inventory goal on specific forest types. The goal of stand specific inventory is to help in the development of more accurate short and long term management strategies on forest types that are, in general, mature or over mature, or where management philosophies or plans for a particular forest type have changed. Stands of jack pine and red oak were targets in 2014. Red oak and northern hardwood were targeted in 2015. In total, 5,320 acres of compartments, 9,361 acres of mature red oak and 2,187 acres of mature northern hardwood were reinventoried in 2015. All of the mature jack pine and red oak stands have now been re-inventoried. Stand information will be evaluated to determine if any short or long term management adjustments (or direction) will be required.

Through 2015, approximately 87% of the forest (over 145,000 acres) has been updated (via compartments).

In addition to compartment and targeted stand updates, 492 acres of individual stands were updated during the timber sale establishment process. Most updates were needed to correct inaccurate data or to remove a stand from the harvest schedule (i.e. riparian buffer or sensitive site).

Invasive Species

Over the past few years, the Department has become more involved in the treatment of invasive species on the County Forest. Invasive species have the potential to alter the ecological relationships among native species, negatively affect the natural functions and structure of forested ecosystems, and can negatively impact the economic value of the forest.

Non-native invasive species like spotted knapweed and common buckthorn and native invasive species like black locust are the most common plants treated on the Forest.

In 2015, approximately 10 acres were treated to manage common buckthorn and approximately 3.5 acres were treated to manage black locust. Most of the treatments involved foliar applications, but stump treatments occurred on stems that were too large to be treated with foliar spray.

Also in 2015, the Department received a \$37,500 Sustainable Forestry Grant for the treatment of spotted knapweed on 48.5 miles of forest roads in the Barnes Barrens Management Area. Herbicide was used to treat spotted knapweed in the first attempt to reduce (hopefully eradicate) further spread into the barrens. The project focuses on roads that are the most heavily infested, but more still needs to be done. This grant will help kick start the program, which will require additional inputs in order to keep the problem in check. Work on the project will continue in 2016.

Land Acquisition

The Department will continue efforts to acquire private properties on a willing seller, willing buyer basis, when advantageous to the long term goals of Bayfield County. A priority will be given to land located within the existing County Forest blocking.

In December 2014, the Department received preliminarily approval for two Knowles-Nelson Stewardship Land Acquisition Grants. The grants were officially awarded in June 2015. As a result, Bayfield County purchased 1,392 acres from Meteor Timber and 463 acres from Lyme Timber. Additionally, the county provided a match of 747 acres of county owned, non-county forest land. In total, 2,602 acres of land will be added to the County Forest.

By using the appraised value of county owned land as the required match, the Department can tailor projects that significantly reduce (or eliminate) out of pocket expenses. The Meteor Timber and Lyme Timber acquisition projects totaled roughly \$2.616 million (including the cost of land, appraisals and other associated fees). The county received approximately \$2.265 million from the Stewardship grant (primarily from the appraised value of matched lands). As a result, the county spent roughly \$350,000, out of pocket, to purchase over \$2.6 million in productive forest land.

ROADS AND TRAILS

The Forestry and Parks Department maintains approximately 1,200 miles of roads and trails on the Forest. These roads and trails provide a plethora of recreational opportunities. Some of the more popular pursuits include: hiking, hunting, mountain biking, snowmobiling, ATVing, cross country skiing, dog sledding, horseback riding, wildlife viewing, firewood gathering and more. See Table 8 below for a summary of designated and non-designated road and trail mileage on the County Forest.

Primary Roads

Approximately 38 miles are classified as primary gas tax roads, which receive maintenance funds from the Wisconsin DOT. These roads serve as primary access routes into portions of the county forest. A few of these roads located in the Towns of Barnes and Hughes also play an integral role in the wildfire protection plan that was developed in 2006.

The Department performs routine annual inspections on every mile of primary road to monitor for both road quality and invasive species. The Department also performs annual routine maintenance on the rights of way for each primary road. Maintenance usually is in the form of mowing, but can also include herbicide if encroaching vegetation is unable to be mowed. Numerous roads were maintained in 2015.

Recreational Use

Trails on the County Forest are used for a variety of recreational purposes. Non-motorized uses such as cross country skiing, mountain biking, hiking, nature watching and dog sledding are extremely popular. Motorized uses such as snowmobiling and ATVing are also very popular. The demand for recreational use on public land is increasing every year.

In addition to daily general recreational use, trails on the County Forest also play an integral role in numerous popular organized events. Such events include, but are not limited to, the American Birkebeiner, Apostle Islands Sled Dog Race, Chequamegon Fat Tire Festival and the Cable Area Off-Road Classic mountain bike race.

Table 7 displays the number of recreational use permits per recreation type that were approved in 2015. All approved permits were for events that utilized a portion of the Bayfield County Forest.

Table 7: Summary of Approved Events									
Trung of Event	Number of Ev	ents per Year							
Type of Event	2014	2015							
Mountain Biking	8	7							
Cross Country Skiing	6	6							
Running	5	3							
Dog Sledding	1	1							
Orienteering	0	1							
Sledding	1	0							
Total	21	18							

The Forestry and Parks Committee approved 18 organized events on County Forest land in 2015, a slight decrease from the previous year. Mountain biking and cross country skiing were the largest event types. The number of requests for mountain bike events has increased steadily over the past decade.

Table 8 displays the approximate miles of designated trails currently located on County Forest land.

Table 8: Summary of Designated Recreational Trails on Bayfield County Forest Land (miles)

Snowmobile	Walking	Dog Sled	ATV	Cross-Country Ski	Mountain Bike
105	15	44	52	31	25

In addition to designated trails, the County Forest offers an abundance of recreational opportunities on roads and trails that are not designated (i.e. signed and maintained by friends or use groups). For example, of the approximate 1,200 miles of roads and trails on the County Forest, 42% can be traveled with a licensed highway vehicle, 72% with an off-highway vehicle (i.e. ATV,UTV) and 91% with a snowmobile. In addition, all are open to hiking and virtually all are open to mountain biking, horseback riding and cross-country skiing.

The Department staff works closely with all recreational user groups on the establishment and/or maintenance of trail systems. Recreational use agreements with organized clubs continue to be pursued at every opportunity.

Town Road Aids

In 2010, Bayfield County developed the Town Road Aid Fund. This fund was created to help improve problem areas on Town Roads that provide critical access to the County Forest. Town Road Aids were initially funded at 1% of total annual timber sale revenues (enacted once actual revenues exceed the budgeted amount). All projects are selected and administered by the Department.

Starting in 2013, Bayfield County increased the funding level to 2% (with a cap of \$80,000). As a result, there was a little over \$80,000 awarded to Towns in 2014, based on the amount of stumpage received in CY 2014 (the slight overage was due to some money not being spent in the prior year). Of the 29 County Forests in the State of Wisconsin, Bayfield County is the only one to offer this additional source of funding.

Once again, all Towns submitted good projects. Most projects revolve around the purchase of material i.e. gravel, but some include culverts and equipment rentals. Awards varied from \$10,000 apiece to Barnes and Bayfield to

around \$2,400 to the Town of Clover. The average award amount was around \$6,000. The program has been very well received, with many Town Roads seeing significant improvements and providing much better access to County Forest lands.

PERMITED USES

Permits are issued by the Forestry and Parks Department for events, right-of-ways, timber storage, private property access, firewood, miscellaneous forest products, and other recreational activities.

Table 9 displays a summary of permits issued on the forest from 2008 through 2015 (a summary of permitted events can be found in Table 7).

Table 9: Bayfield County Forest Summary of Issued Permits and Approvals

Year	Fire Wood	Balsam Boughs	Cones*	Christmas Trees	Birch Stems	Access	Events	Disabled Hunting	Storage
2008	360	8	0	1	0	2	9	3	1
2009	423	5	1	1	0	0	10	3	1
2010	436	5	1	1	0	3	10	3	2
2011	503	7	1	6	0	9	10	10	2
2012	441	6	1	7	0	8	12	7	2
2013	406	16	13	3	2	6	17	6	2
2014	486	9	6	4	1	7	21	5	2
2015	394	8	5	5	0	10	18	9	1
Avg.	431	8	4	4	0	6	13	6	2

^{*} specifically advertised for jack pine cones in 2013

Firewood permits comprise the vast majority of the total permits issued on an annual basis. In 2015, 394 firewood permits were issued, down roughly 20% from 2014.

Sand and Gravel

Sand and gravel is extracted and sold from county managed pits, to be used on approved municipal projects. Table 10 displays the total amount of sand and gravel and revenues received from 2008 through 2015.

Table 10: Sand and Gravel Summary

		J
Year	Yards	Value
2008	6,120	\$3,060.00
2009	300	\$150.00
2010	12,589	\$9,441.75
2011	751	\$563.25
2012*	13,029	\$19,544.00
2013	0	\$0.00
2014	11,000	\$16,500.00
2015	0	\$0.00
Avg.	5,474	\$6,157.38

^{*} Highway 13 Re-Paving Project

Most revenues received from the sale of sand and gravel are deposited in a non-lapsing account for eventual site reclamation. A total of \$0.00 was generated from sand and gravel in 2015, as all pits were inactive.

WILDLIFE HABITAT IMPROVEMENT/MONITORING

Forest openings, dominated by forbs and grasses, are important habitat for a great diversity of wildlife species. Since the mid 1970's, numerous, small forest openings have been maintained on the forest to encourage this diversity of habitat. The openings are relatively small in size (average about 1 acre) and are spread throughout the county forest (although they are more numerous in the Bayfield peninsula). Each opening is treated about every five years to discourage encroaching woody vegetation.

Table 11 displays a summary of the wildlife opening maintenance program from 2008 through 2015.

Table 11: Bayfield County Forest Summary of Maintained Wildlife Openings by Treatment

Year	Mowed Number	Mowed Acres	Hand Treated ¹ Number	Hand Treated ¹ Acres	Total Number	Total Acres
2008	44	50	77	60	121	110
2009	62	70	53	24	115	94
2010	45	44	50	57	95	102
2011	46	53	52	24	98	77
2012	0	0	76	68	76	68
2013	59	52	63	53	122	105
2014	34	40	48	25	82	65
2015	24	32	50	55	74	87
Average	39	43	59	46	98	88

using a mix of herbicide and hand cutting

In 2015, 50 wildlife openings, totaling 55 acres were maintained by hand, using a mix of herbicide and cutting. Openings are also scheduled for mowing four out of every five years. There were 24 openings mowed in 2015 for a total of 32 acres. In total, 74 openings, covering 87 acres were treated in 2015.

In 2008, a breeding bird monitoring project was developed for the County Forest. In 2008 and again in 2009, 350 permanent diurnal and 40 nightjar points were completed. An additional 297 diurnal and 17 nightjar points were taken in 2010. The remaining portion of the forest was completed in the spring of 2011. In total, 1,200 diurnal and 200 nightjar points have been taken. The collection of field data is now complete. The results will be used to measure bird/habitat associations, anticipate how forest management may influence these relationships and predict general species occurrence.

We are still periodically working with the DNR and other resource professionals to analyze the data and/or assist in other bird monitoring projects. One project involves the use of conspecific attraction to help in the monitoring for the presence of Kirtland's Warblers in the Barnes Barrens Management Area. Conspecific playback literally involves the broadcasting of the primary songs of a species, with the aid of sound equipment, to encourage individuals to settle in an area. In 2014, the DNR detected one male Kirtland's Warbler, with no females or nesting being located. In 2015, three males were detected, with no females or nesting being located. The Barnes Barrens Area provides exceptional habitat for the endangered Kirtland's Warbler. When breeding populations do occur (which is only a matter of time), this area will be a prime example of how intensive, sustainable forest management can provide critical habitat for a variety of rare species.

FINANCIAL ASSISTANCE - GRANTS AND AIDS

Financial assistance plays a major role in helping to achieve annual and long term objectives.

Table 12 outlines some of the major grants and aids awarded to the Department from 2008 through 2015. Every award listed in the table, with the exception of the Arbor Day grant, has come from the State of Wisconsin.

Table 12: Bayfield County Forestry and Parks Department Summary of Major Grants and Aids

Year	County Forest	Wildlife Habitat	County Forest	Sustainable	County	Arbor Day	Total
	Administrator	Improvement	Road Aid	Forestry	Conservation		Total
2008	\$31,933	\$16,929	\$10,440	\$39,720	\$4,125	\$0	\$103,146
2009	\$35,762	\$16,945	\$12,126	\$33,000	\$2,289	\$0	\$100,122
2010	\$44,039	\$8,472	\$11,390	\$6,205	\$3,807	\$20,400	\$94,313
2011	\$44,039	\$8,472	\$11,347	\$0	\$0	\$46,202	\$110,060
2012	\$46,877	\$8,472	\$11,330	\$0	\$6,500	\$18,450	\$91,629
2013	\$47,814	\$8,416	\$11,896	\$46,329	\$0	\$12,450	\$126,904
2014	\$52,885	\$8,015	\$11,917	\$0	\$4,183	\$0	\$77,000
2015	\$51,210	\$7,991	\$11,918	\$37,718	\$0	\$13,260	\$122,097
Average	\$44,320	\$10,464	\$11,545	\$20,371	\$2,613	\$13,845	\$103,159

In addition to the grants outlined in Table 12, as previously stated, the County was awarded two Knowles-Nelson Stewardship grants in 2015. Combined, these grants totaled \$2.265 million and were used to add 2,602 acres of forest land to the County Forest program. Once all of the stands are enrolled under County Forest Law, County Forest land will increase from 169,395 acres to 171,997.

PARKS & CAMPGROUNDS

In September 2010, the management of all county owned parks and campgrounds were assigned to the Forestry and Parks Department. This includes the management of three campgrounds (Twin Bear Lake, Delta Lake and Big Rock) and one day use park (Atkins Lake). Below is a summary of all major accomplishments since the transition.

1. Twin Bear Campground

- a. Complete electrical rebuild and upgrade throughout the entire campground.
- b. Repair of all major outbuildings and store.
- c. Reconstruction of the beach area.
- d. New fishing pier near the beach area.
- e. New ADA access ramp to the beach area.
- f. Creation of new tent camping site.
- g. Re-grade of the parking area to control runoff and improve drainage.
- h. New gas hot water heaters, for each shower, in the shower building.
- i. Installed highspeed wireless internet service throughout the entire campground.
- j. Installed new playground equipment near the beach area.
- k. Re-established and re-surfaced the walking path near Puig's Point.
- 1. Improved an old dock and added a new access point to the lake.
- m. Partnered with Brule River Canoe to provide canoe and kayak rentals.
- n. Numerous other minor improvements throughout the campground.

2. Delta Lake Campground

- a. Complete camping pad re-grade on nearly all campsites.
- b. New playground equipment near beach area.
- c. New fishing pier.
- d. Repair of all major outbuildings.
- e. New electric added to last four remaining powerless campsites.
- f. A small timber sale was established to remove all dead and dying hazard trees. Mostly over mature white birch and aspen.
- g. Installed highspeed wireless interest service throughout the entire campground.
- h. Added another mooring dock/fishing pier and small picnic area.
- i. Partnered with Brule River Canoe to provide canoe and kayak rentals.
- j. Minor maintenance on the wooden access ramp.

k. Numerous other minor improvements throughout the campground.

In addition to the physical improvements to the parks and campsites, many logistical improvements have also been made. At both Twin Bear and Delta Lake, seasonal sites have been re-structured in a way to better capture the value potential in each campground. The reservation system for each was also adjusted to give all interested an equal chance at reserving a site.

TRAILS AND RECREATION

Recreation, whether motorized and part of the state funded system, or non-motorized and part of a designated trail network, is an integral and important component of any forest management program. Over the past few years, the Department has emphasized the importance of recreation and making a concerted effort to maximize, or better capture, the recreational potential of the Forest. At over 170,000 acres and spread out over the length of Bayfield County, the Bayfield County Forest provides, or has the potential to provide, a plethora of recreational opportunities.

Incorporating recreation in typical forest management strategies can be a challenge. Individuals recreating on the County Forest will encounter forest management. Existing designated trails are often located within or adjacent to active timber sales. However, this interaction provides excellent opportunities to educate and explain general forest management practices.

Management practices are rarely altered due to the presence of a recreational trail. The Department prefers to work closely with use/friends groups to explain the upcoming harvest, as well as identify any potential issues that could arise. Combining education, direct collaboration with various user groups and occasional slight timber sale modifications, the Department can capture the sustainable management potential of the Forest and provide exceptional recreational opportunities, on the same piece of ground.

Motorized Recreation

In July 2013, the management of the Bayfield County Trails program was assigned to the Forestry and Parks Department. The primary responsibilities revolve around the administration, oversight, coordination and grant/aid management of the state funded snowmobile and ATV trails located on County and private lands.

Table 13 lists the total miles per motorized trails type, as well as the amount of state maintenance aids received.

Table 13: Mileage and Funding For Trails Managed by Bayfield County

Trail Type	Miles	Rate/Mile	Total
Snowmobile	437	\$250	\$109,250
ATV Summer	86.75	\$600	\$52,050
ATV Winter	168.15	\$100	\$16,815
UTV Summer	86.75	\$100	\$8,675
Total	778.65		\$186,790

The State of Wisconsin provides annual aids for the maintenance of existing motorized trails (see Table 13) and also offers some additional funding opportunities for individual trail rehabilitation and new trail development projects.

Below are some of the more noteworthy accomplishments on the state funded motorized trails systems in 2015:

✓ Completed the rehabilitation of approximately four miles of trail on the Wally Polk Trail in Port Wing. Trail was re-graded, shaped and material delivered. A size-limiting bridge was uninstalled and replaced with a 48-inch culvert to accommodate logging traffic and create better access into this remote area of the County Forest.

- ✓ Installed an 80-foot pre-fabricated steel bridge (Andersen Bridges) over a tributary to the Flag River on Trail 3 south of Port Wing. The bridge will better protect the natural resource and provide better access for both the ATV and snowmobile trail.
- ✓ Repaired and re-established a snowmobile bridge on Trail 1 between Echo Valley and Henkens Road. The bridge had been compromised by beaver activity. Approaches were re-established. Improvements to the trail were also made during the project as part of a timber sale road project.
- ✓ Re-routed snowmobile Trail 18 off of Halfway Road and onto County forest roads. Also established a new trail through one of the parcels acquired with Stewardship funding. The trail was constructed with the assistance from Wisconsin DNR staff and the finishing work was completed by the local snowmobile club. The re-route has been very well received and is a beautiful trail through the Forest.
- ✓ Repaired a serious erosion problem adjacent to State Highway 13 on snowmobile Trail 13. Collaborated with the Highway Department and local utility companies to find a feasible solution that was cost effective. Repair work will be monitored after spring run off to evaluate next steps in remediating the issue.
- ✓ Resurfacing of ATV trails in Cable. Establishment of new trail miles (Blue Moon Road and Island Lake Connectors).
- ✓ Temporarily installed timber mats on a potential erosion issue on Trail 13 south of Washburn. The site will be monitored to determine future direction. If (or when) the trail fails (it's on a steep portion of the old railroad grade), the cost of repair will be significant.
- ✓ Some minor grading and resurfacing of the Washburn Business Trail (ATV trail).

Bayfield County works with local clubs and Alliances to ensure that all trails are in a safe and enjoyable riding condition. All routine or minor maintenance activities are typically accomplished by the clubs, while most major rehabilitation projects are administered by the Department.

Routine maintenance can include the posting/maintenance of signs, brushing, removal of debris, mowing, grooming, minor washout or rutting repair, etc. Major rehabilitation can include significant culvert washouts, bridge repair, significant damage occurring as a result of flooding or other major storm event, etc.

In addition to the state funded trails, the Forest provides numerous opportunities to recreate with a motorized vehicle. Currently, there is a total of just over 1,200 miles of inventoried roads and trails on the County Forest. Of that total, approximately 72% are accessible with an ATV/UTV and 42% accessible with a highway vehicle. The County monitors the condition of roads and trails and performs routine maintenance on a case by case basis.

Non-Motorized Trails

Numerous recreational opportunities exist on the County Forest. As stated above, over 1,200 miles of roads and trails have been inventoried on the County Forest. Nearly all of these trails are available for hiking, biking, cross country skiing, snowshoeing and horseback riding.

Most trails open for non-motorized use are undesignated and not maintained for a specific form of recreation. As a result, trail conditions can also be highly variable. However, some trails are maintained and designated/signed for certain uses. Most are managed through partnerships/agreements with non-profit organizations, but some are maintained directly by the Department.

Currently, there are two major areas of the County Forest where non-motorized recreation is more organized and intensive. These areas are the non-motorized block in Cable and the low-motorized area near Mt. Ashwabay. In these areas, the Department has developed strong partnerships with numerous non-profit organizations on the designation and maintenance of the trails.

In the Cable block, the Chequamegon Area Mountain Bike Association (CAMBA) maintains miles of mountain bike trails on the County Forest. The network includes a combination of single track trails, sustainably built specifically for mountain bike use, and existing logging roads. These trails connect to those located on the Chequamegon Nicolet National Forest and Sawyer County Forest to form one of the most extensive mountain bike networks in the nation. CAMBA maintains a recreational use permit with the Department that describes the partnership and how trails are maintained or developed on the Forest.

Numerous mountain bike related events are hosted on trails located within the County Forest in the Cable area. Some of the most popular include: CAMBA hosts the Festival of Trails; the Cable Area Chamber of Commerce hosts the Cable Area Off-Road Classic; Life Time Fitness hosts the Chequamegon Fat Tire Festival; and the American Birkebeiner Association hosts the Fat Tire Birkie (in the winter). All of these events are extremely popular and bring thousands of riders and spectators into the area.

Also in the Cable block, the North End Ski Club and American Birkebeiner Association (ABA) maintain cross country ski and snowshoe trails on the County Forest. Some of the ski trails utilize the same portion of ground as the bike trails. Snowshoe trails are also maintained on most of the single track trails. Both organizations maintain recreational use permits with the Department.

The North End Ski Club also maintains a warming cabin, outhouse and storage building on County Forest land. The cabin and outhouse are open for public use. The storage building is used to house much of the gear and grooming equipment required to maintain the trails. They also host numerous cross country ski events including their flagship North End Classic race.

The American Birkebeiner Association maintains roughly three miles of the famed Birkie trail on County Forest land. They also maintain a newly constructed warming/storage building and privy. The world famous American Birkebeiner cross country ski race, as well as the Kortelopet, Prince Haakon and Birkie tour ski events are all held on County Forest land. The ABA also hosts running events and the Fat Tire Birkie (see above).

In the northern portion of the Forest, the Ashwabay Outdoor Recreation Foundation (AOEF) maintains an extensive network of cross country ski and snowshoe trails, in part, on County Forest land (also on County land not part of the County Forest i.e. Jolly Trails). Trails are groomed for classic or skate skiing. AOEF hosts numerous events (both summer and winter events) on the trails including: the Peel Out 5k Run; WinterDASH running event; and a Fat Tire Expo/Time Trial. In addition, numerous other groups host events on these same trails, including CANSKI's Summit Cross Country Ski Race. The Bayfield and Washburn school districts have also used portions of the trails for various ski and running meets.

Recently, a branch of CAMBA (CAMBA North) was formed to develop a mountain bike trail network in the same general area near Mt. Ashwabay. In 2011, the Department approved CAMBA's proposal to construct up to 30 miles of new single track mountain bike trails on County Forest land. As of the end of 2015, nearly XX miles of sustainably built, single track mountain bike trails have been constructed. Many of these trails are also being maintained in the winter by the North Coast Cycling Association (NCCA) for fat tire mountain bike use.

Non-motorized recreational opportunities abound on County Forest land. In addition to those previously mentioned, some of the more popular designated trails include the North Country Trail. Approximately 8 miles of the North Country Trail travels within the county forest. These trails are maintained by local chapters of the Association. Regarding events, the Bayfield Chamber hosts the popular Apostle Islands Sled Dog Race, which, in part, utilizes trails on county forest land located in the Town of Bayfield (with a small portion in the Town of Bayview).

Every year, the Department works closely with all user groups on the maintenance of and/or improvements to existing trails. Periodically, new trails or re-routes are also addressed. All are treated on a case by case basis, with larger projects needing Committee approval.

The Department is in the process of developing a new recreation strategy that will, in part, better identify existing infrastructure and future potential, as well as define future direction. Non-motorized and motorized recreation, throughout the County, will be explored as part of the process. In the meantime, the Department recently made improvements to the Lost Creek Falls trail, located just south of Cornucopia, which provides access to the only waterfalls on County Forest Land. Improvements include the construction of boardwalks over the more prominent wet areas, the construction of new trail surface, and enhancements to existing trail. Improvements will continue in early 2016 and will include additional trail and trail head enhancements, improved signage and the installation of an informational kiosk.

Also in 2015, the Department began the process of constructing two rustic yurts on County Forest land. Both yurts would be located on land currently identified as high use recreational areas (Cable and Ashwabay, as described above). Direct access to designated and well maintained 4-season recreational trails will be one of the attractions. Access to the yurts will vary from ½ to ½ mile from designated parking areas. Renters can either hike, bike, ski or snowshoe to the yurts (no public vehicular access). Each yurt will be equipped with a wood stove (for winter use), with firewood provided by the County. The yurts will sleep 6 people, will have a privy, fire ring, picnic tables, expansive wood deck, metal outdoor storage locker (to protect from bear or other unwanted animals), no power, no access to water, no garbage receptacles. Pack out what you pack in ethics will be strictly enforced. The yurts will provide the public a unique and different way to enjoy the expansive natural resources of Bayfield County. Reservations will be made online. The expectation is to have both yurts constructed and ready to rent around the middle of 2016.